A.D. 1842 . . . . . N° 9435.

SPECIFICATION

OF

SAMUEL CARSON.

PURIFYING AND PRESERVING ANIMAL SUBSTANCES.

LONDON:
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1855.

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Purifying and Preserving Animal Substances.

CARSON'S SPECIFICATION.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, SAMUEL CARSON, of York Street, Covent Garden, in the County of Middlesex, Gentleman, send greeting.

WHEREAS Her present most Excellent Majesty Queen Victoria, by Her Royal Letters Patent under the Great Seal of Great Britain, bearing date at Westminster, the Third day of August, in the sixth year of Her reign, did, for Herself, Her heirs and successors, give and grant unto me, the said Samuel Carson, her especial licence, full power, sole privilege and authority, that I, the said Samuel Carson, my ex̃ors, adm̃ors, and assigns, or such others as I, the said Samuel Carson, my ex̃ors, adm̃ors, or assigns, should at any time agree with, and no others, from time to time and at all times during the term of years therein expressed, should and lawfully might make, use, exercise, and vend, within England, Wales, and the Town of Berwick-upon-Tweed, my Invention of "IMPROVEMENTS IN PURIFYING AND PRESERVING ANIMAL SUBSTANCES;" in which said Letters Patent is contained a proviso that I, the said Samuel Carson, shall cause a particular description of the nature of my said Invention, and in what manner the same is to be performed, to be inrolled in Her said Majesty's High Court of Chancery within six calendar months next and immediately after the date of the said in part recited Letters Patent, as in and by the same, reference being thereunto had, will more fully and at large appear.

NOW KNOW YE, that in compliance with the said proviso, I, the said Samuel Carson, do hereby declare that the nature of my said Invention, and the manner in which the same is to be performed, are fully described and ascer-

tained in and by the following statement thereof, reference being had to the Drawings hereunto annexed, and to the figures and letters marked thereon, that is to say:—

My Invention relates,—

First, to a mode of injecting pickling or preservative liquids into pieces of meat or animal substances.

Secondly, my Invention relates to a mode of causing pickling or preservative liquids to penetrate more quickly into the meat or animal substances by atmospheric pressure, by means of a vacuum or partial exhaustion being obtained at some part of the piece of meat or animal substance; and any gases in the meat, consequent on partial decomposition, will be removed, and replaced by atmospheric air or preservative materials.

Thirdly, my Invention relates to a mode of causing preservative liquids to penetrate more quickly into meat or animal substances by means of pressure produced by centrifugal force.

And, fourthly, my Invention relates to a mode of causing preservative liquids to penetrate more quickly into meat or animal substances by means of a weight of liquor in motion being suddenly checked or stopped. And in order that my Invention may be fully understood and readily carried into effect, I will proceed to describe the Drawings hereunto annexed.

Description of the Drawings.

Figures 1 and 2 represents the sections of two apparatus somewhat different from each other, either of which may be used when the preserving liquid is to be forced into a piece of meat or other animal substance requiring to be preserved, such as a tongue. Each apparatus consists of a small syringe, supplied with the desired preservative liquid from a vessel which surrounds it, or otherwise suitably in connection with it. In each of the Figures 1 and 2, *a* is a small syringe; *b*, being the plunger; *c*, the handle for working the plunger. These syringes are applied to the vessel *d*, as are shewn; and each of the vessels *d* is supplied with suitable pickling or preservative liquid at the opening *e* at the upper end, which has a stopper to close it. *f*, *f*, are the ways by which the liquid passes from the vessel *d* into the barrel of the syringe when the plunger is raised. *g* is a small tube which opens into the lower part of the barrel of the syringe; and, when in use, this small tube is forced into the piece of meat, and the handle of the pump set in motion, by which means the liquid will be forced into and caused to pervade the whole of the piece of meat, and will be seen to pass out from all parts of the surface, when the operation will be complete. In this manner may an ox tongue, or a large

piece of meat, be salted or cured in a few minutes; and in case the liquor does not come out all over the surface of the piece of meat, then it will be desirable to remove the instrument to another part where the liquid does not appear to have come. I would remark, that I am aware that it has been before proposed to cure the whole of an animal (after it has been killed), by introducing a pipe into the heart, or one of the large blood vessels, and thus to fill all the blood vessels, by means of a pump. But this mode renders it necessary to operate on the whole animal; but by my mode of operating, by using a small tube which enters into the flesh at any part of a piece of meat or a tongue, after the animal has been cut up, I can in a few minutes cure such piece of meat or tongue.

I will now describe the second part of my Invention. Figure 3 is the section of a syringe for obtaining a vacuum or partial exhaustion opposite any part of a piece of meat which it is desired to cure. At the lower end of the syringe is a projecting tube *h*, with holes in it, which is forced into the piece of meat or tongue; or the end of the syringe may be open; or it may have an end, such as is shewn at *i*, Figure 4, with a series of perforations. This apparatus is to be applied to any part of the surface of a piece of meat, and the plunger worked several times up and down, and then the piston or plunger is to be drawn up and made fast by the bolt *j*, or by any other convenient means, thus obtaining a vacuum, or a partial vacuum, within the syringe. By this operation, if there be any gases interior of the meat consequent on decomposition of any part thereof, the same will be removed, and the meat thereby purified. The piece of meat being immersed in brine, or other proper preparation of preservative liquid, previously to using the syringe, as above described, the effect will be that the pressure of the atmosphere will force the liquid to flow through the meat towards the syringe. This operation will sometimes take some hours; and in this manner will the piece of meat be cured. I would remark, that in some cases I have found it desirable to use this instrument in withdrawing the gases from near the bone of a joint of meat before it is cooked, when the joint has been kept long. In such cases I use the tube when necessary to penetrate to the bone; and this tube may be used in place of obtaining the vacuum at the surface, as just described.

I will now describe the third part of my Invention. Figure 5 shews a side view in section of a machine constructed according to my Invention. Figure 6 shews a plan thereof. This machine produces a pressure of fluid in vessels, applied by means of the outward pressure of fluids caused by rotatory motion. *g*, *g*, are two vessels, but more may be used, affixed to and carried by the frame *h*, *h*, the nature of which is clearly shewn in the Drawing. The

frame *h*, *h*, is affixed to an axis *i*, which turns in bearings *j*, *j*, as is shewn. Motion is communicated to the axis *i* by means of cog wheels *k*, *l*, the axis *m*, and the crank handle *n*, or by any convenient manner. The vessels *g* have covers *o*, *o*, which are closed when the supply of meat has been introduced. *p*, *p*, are air cocks for allowing air to pass, as the vessels *g*, *g*, are filled up with preservative liquid. The vessels *g*, *g*, open into the vessel *q* by trunks *r*, *r*, the vessel *q* being open to the atmosphere, into which the preservative liquor is run from a suitable reservoir by means of the pipe *s*. The pieces of meat requiring to be preserved are placed in the vessels *g*, *g*, which are then to be filled with brine, the air being allowed to escape; after which the air cocks are to be closed, and rotatory motion is to be communicated to the machine; by which means the liquor will be caused to press outwards from the vessel *q*, with a pressure proportioned to the velocity of the motion of the vessels *g*, *g*; and in this manner may a pressure of preservative fluids be caused to act on, and penetrate into, the pieces of meat in the vessels *g*, *g*.

I will now describe the fourth part of my Invention. Figure 7 shews a section of a machine according to this part of my Invention. A is a vessel having a cover B, which is to be removed, in order to introduce a charge of pieces of meat; or there may be an opening through the cover B for introducing the pieces of meat; such opening having a cover. C is a flexible tube, by which brine or other preservative liquor is introduced into the vessel A from a suitable reservoir. D is a cock for drawing off the liquor. E is what I call a pressure pipe, which I affix to the upper part of the vessel A. This pipe rises several feet according to the pressure intended. I find twenty feet suitable for the purpose. The vessel A is moved up and down, it being governed by the guide framing F, F; and the vessel A is counterbalanced by means of the weight G. In using this machine, the pieces of meat having been introduced, and the vessel A filled with the preservative liquor, which it is intended to use; the pipe E is also nearly filled with the liquor; the vessel A is then raised up to the position shewn by dotted lines, or to a less height, and is then caused to descend quickly, which will readily be accomplished during the vessel being in a state of balance, or nearly so, by the weight G. The effect will be that the weight of the column of liquid being in quick motion, and suddenly checked, will cause the liquor to exert great pressure, and thus will it more quickly penetrate the pieces of meat contained in the vessel A.

Having thus described the nature of my Invention, and the manner in which the same is to be performed, I would have it understood that I do not confine myself to the precise details shewn and described, so long as the

peculiar character of either part of my Invention be retained. But what I claim is,—

First, the mode herein described of forcing preservative liquids into pieces of meat or animal substances, as described in respect to Figures 1 and 2.

Secondly, I claim the mode of purifying and preserving meat or animal substances, by removing gases, if any, and producing a vacuum or partial exhaustion opposite some part of the surface of a piece of meat when in a preservative liquor, thereby causing such liquor more quickly to be pressed into the meat or animal substance by the atmosphere, as described in respect to Figures 3 and 4.

Thirdly, I claim the mode of preserving animal substances, by causing preservative liquors to penetrate more quickly, by means of the pressure produced by centrifugal action. And,

Fourthly, I claim the mode of preserving animal substances, by causing preservative liquors to penetrate more quickly, by means of the pressure of fluid in motion being suddenly checked, as above described.

In witness whereof, I, the said Samuel Carson, have hereunto set my hand and seal, this Third day of February, in the year of our Lord One thousand eight hundred and forty-three.

SAM^{L} (L.S.) CARSON.

AND BE IT REMEMBERED, that on the Third day of February, in the year of our Lord 1843, the aforesaid Samuel Carson came before our said Lady the Queen in Her Chancery, and acknowledged the Specification aforesaid, and all and every thing therein contained and specified, in form above written. And also the Specification aforesaid was stamped according to the tenor of the Statute made for that purpose.

ROSE.

Enrolled the Third day of February, in the year of our Lord One thousand eight hundred and forty-three.

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FIG. 3.

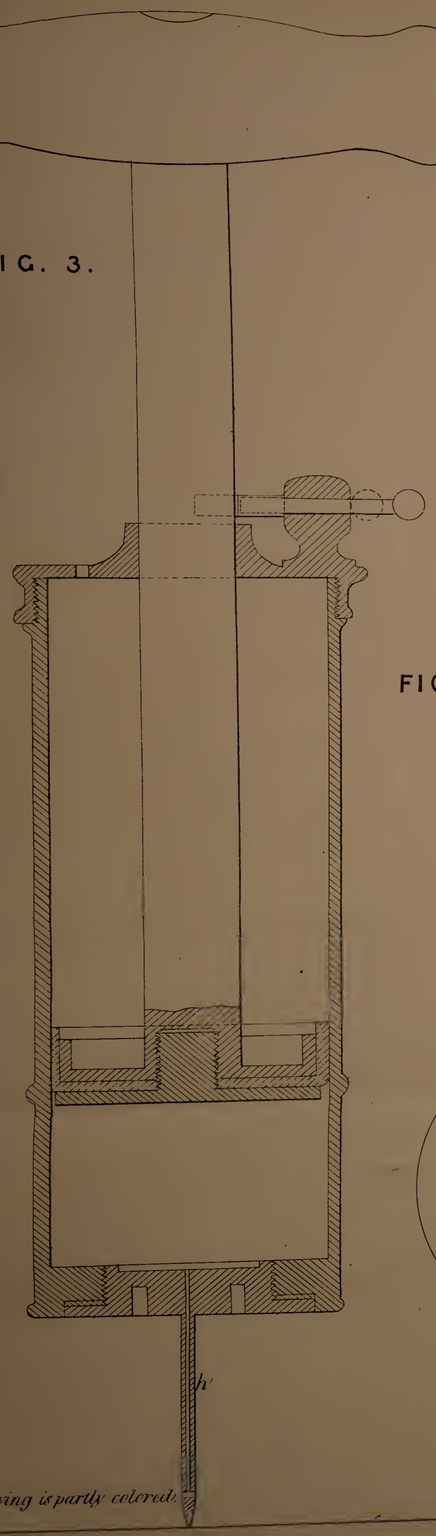


FIG. 4.

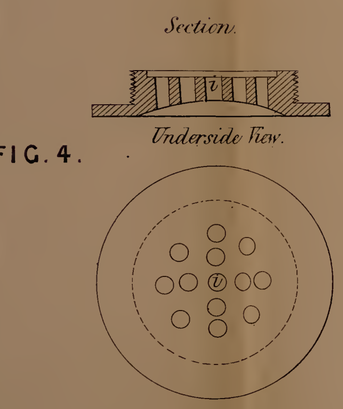
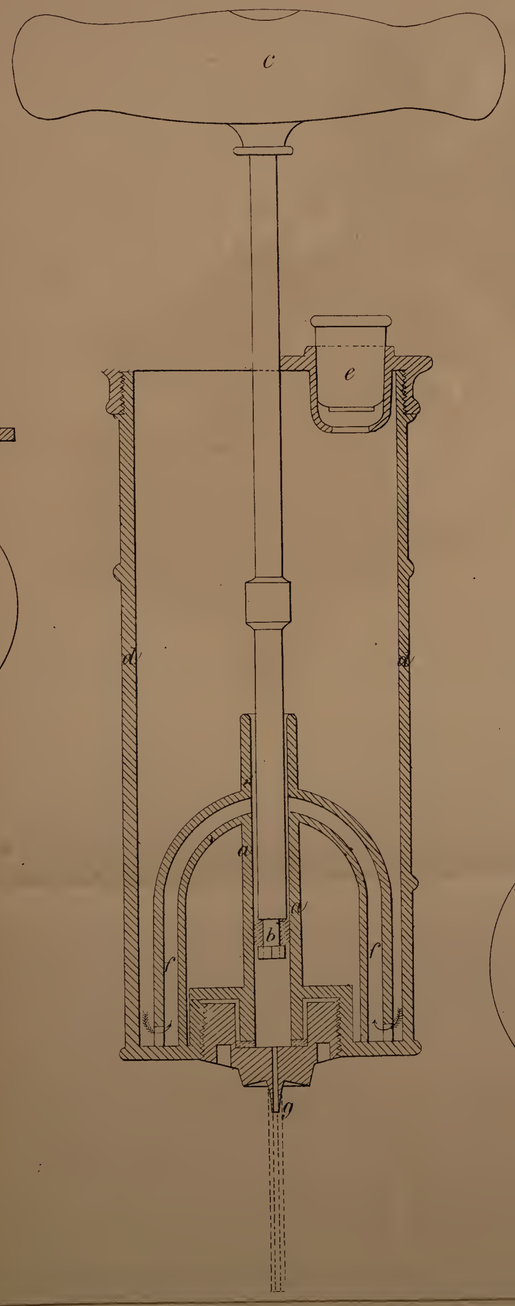


FIG. 1.



Underside View Fig. 1.

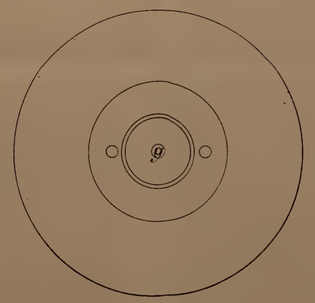
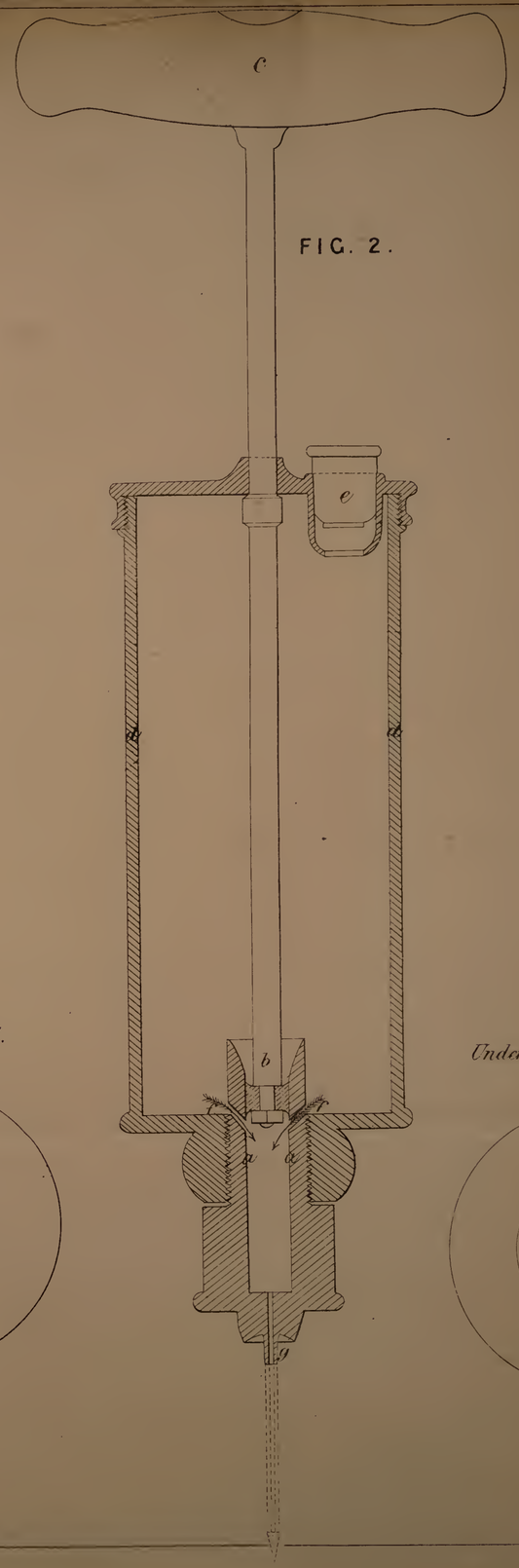
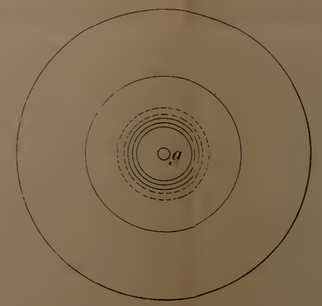


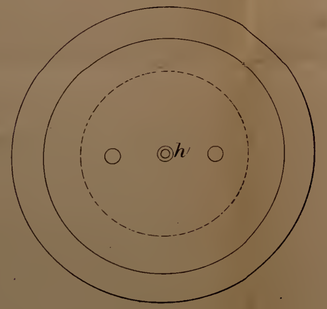
FIG. 2.



Underside View Fig. 2.



Underside View.



rolled drawing is partly colored.

Drawn on Stone by Malby & Sons

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FIG. 6.

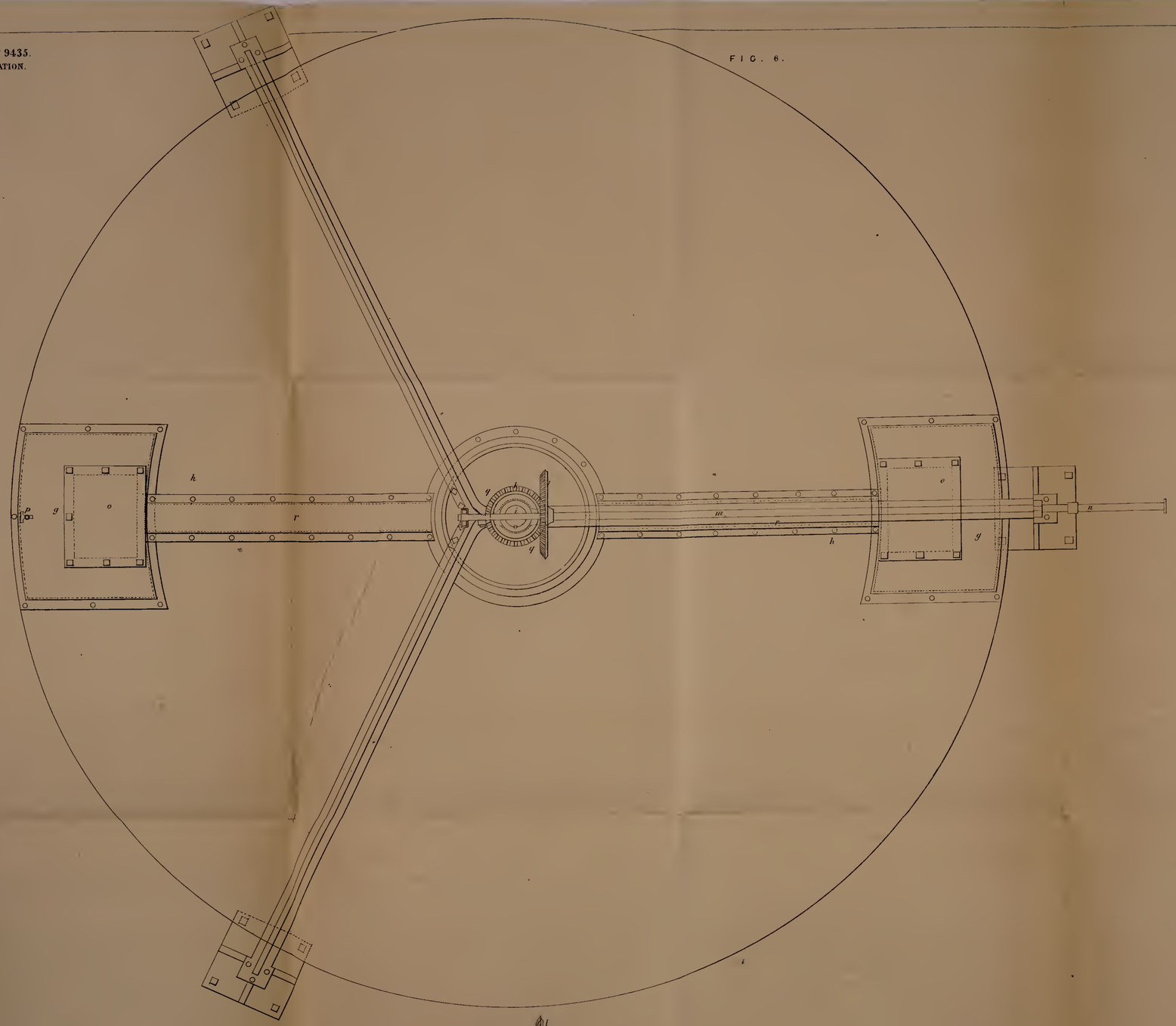


FIG. 5.

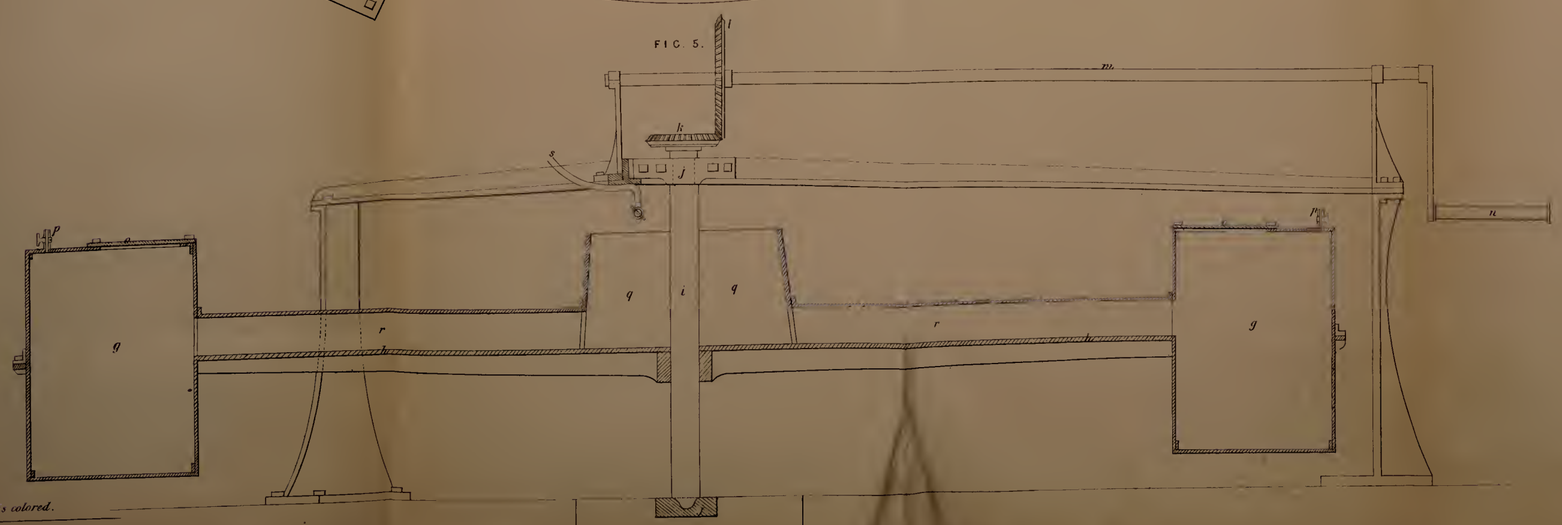
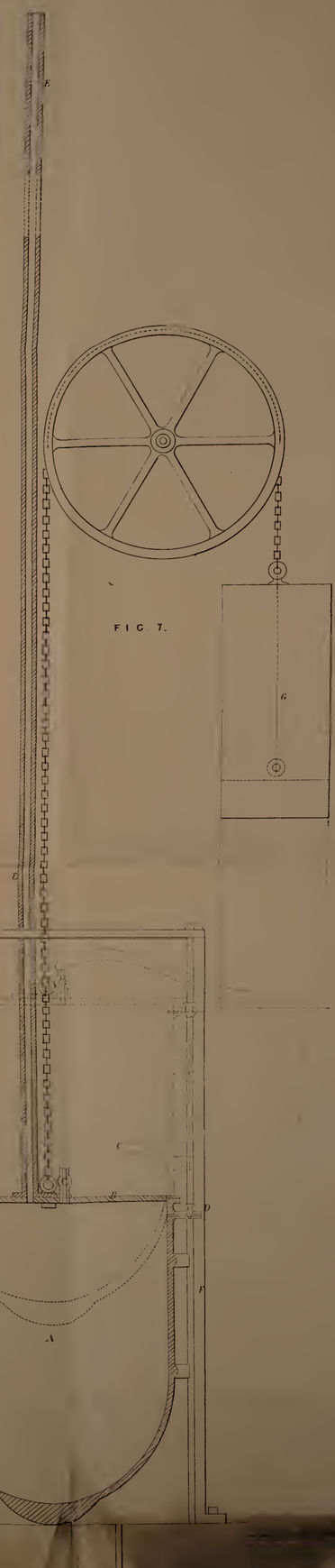


FIG. 7.



The enrolled drawing is colored.